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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 16

Application Number: 09/487,583
Filing Date: January 19, 2000
Appellant(s): BLOOMBERG ET AL.

MAILED

MAR 24 2004

Technology Center 2600

James A. Oliff & Robert J. Webster
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on January 22, 2004

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Claims 1-3, 23, 24, 27, 30, 31, and 39 stand or fall together.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix of Claims to the brief is correct.

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(9) Prior Art of Record

GB 2,247,596	Jozefowski et al.	03-1992
EP 0,590,923	Smith	09-1993

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1-3, 23-24, 27, 30-31, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2247596 to Jozefowski in view of EP 0590923 to Smith.

As to claim 1, Jozefowski discloses an image rendering method comprising:

an encoder (run-length coding) that encodes the image data to provide encoded image data including anti-aliased grayscale text or line art that includes an identification of boundary pixels and associated pixels values (Figs. 1b, 2b-2c, page 3-4, 7, 10-11, 19-21), wherein the encoder separate the boundary pixels into interior boundary pixels (dark hatched pixel with code 0 or 4) and exterior boundary pixels (light hatched pixel with code 1-3)(Figs, 1b, 2b and 2c, page 10-11, 18-21); and

a decoder that is coupled to the encoder and decodes the encoded image data to provide decompressed data including anti-aliased text or line art data and renders the decompressed data (Figs. 1B and 2B, page 3-4, 7, 18-21).

Jozefowski does not explicitly mention the scanner that is well known in the art but use an video camera to produce the image data(page 14).

Smith, in an analogous environment, discloses a scanner scans an image and produces image data (Fig. 5 element 50) and also encoding the anti-aliased text in encoded data.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scanner in the Jozefowski' system in order to easily create an input image to be manipulated using anti-aliasing technique (Smith, col. 1 line 47-col. 2 line 28, col. 3 line 42-col. 4 line 18, Jozefowski, page 2-3).

As to claim 2, the combination and Jozefowski and Smith does not explicitly mention MRC image architecture.

Examiner takes Official Notice that this feature is notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the MRC in the Jozefowski' system in order to process the image with mixed line art and graphic content.

As to claim 3, Jozefowski further discloses the memory coupled to the encoder and decoder and that stores encoded image data, the memory being coupled to the decoder (page 27).

As to claim 30, Jozefowski discloses an image rendering method comprising:

generating an anti-aliased grayscale version of text or line art that includes determining pixel values of boundary pixels in the anti-aliased grayscale version of text or line art (Figs. 5A-6B, page 24-26);

separating the pixels into boundary pixels (hatched pixels or pixel with 1 in fig. 5a) and non-boundary pixels (Figs. 1b, 2b-2c, 5A-6B, page 3, 16-18, 24-26,); and

rendering the image using the determined pixels values (Figs. 5A-6B, page 24-26);

Jozefowski does not explicitly mention the scanner that is well known in the art but may use an video camera (page 14).

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Smith, in an analogous environment, discloses a scanner scans an image including line art or text and produces image data (Fig. 5 element 50) and also encoding the anti-aliased text in encoded data.

An analogous argument to combine Jozefowski and Smith is addressed with regard to claim 1.

As to claim 23, Jozefowski further discloses high resolution binary data is produced by super sampling (page 6, 18-20) and separates the boundary pixels into interior and exterior pixels (Fig. 1b, 2c, page 5-7 and 18-22, note that in Fig. 2c sub-pixel with code 1 is exterior pixel and sub-pixel with code 4 is interior pixel).

As to claim 24, Jozefowski further discloses determining the a first global grayscale value (4) corresponding to the interior boundary pixels and second global grayscale value (1) corresponding to the exterior boundary pixels and storing the pixel data including the global values (Fig. 2c, page 5-7 and 20-22, note that in Fig. 2c sub-pixel with code 1 is exterior pixel and sub-pixel with code 4 is interior pixel and the values are stored for the decoding).

As to claim 27, Jozefowski further discloses the decoder renders the image using the interior and exterior pixel values and the high binary resolution data (Fig. 2c, page 5-7 and 20-22).

As to claim 31, Jozefowski further discloses individually derived values of grayscale boundary pixels using the high resolution data and storing the derived values of the boundary pixels (Fig. 2c, page 5-7 and 20-22), and other limitations are addressed with regard to claim 23.

As to claim 39, Jozefowski further discloses storing a full image mask corresponding to the scanned image data (Figs. 5A and 6A).

Allowable Subject Matter

2. Claims 26 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including **all of the limitations of the base claim and any intervening claims.**

Claims 50-53, depend from claim 49 are, therefore, objected.

Claims 60 is allowed.

(11) *Response to Argument*

(A) The following discussion relates to the rejection of claims 1-3, 23-24, 27, 30-31, and 39 are rejected under 35 U.S.C. 103 (a) as unpatentable over GB 2247956 to Jozefowski in view of EP 0516477 to Smith.

1. Appellants' argument---- Appellant alleged that the Examiner in the Final Action states that "Jozefowski clearly teaches a similar anti-aliasing system to that of applicant... the standard for whether a reference discloses a claimed feature that the reference allegedly discloses is not that the reference teach something "similar"... Thus, the final Office action is inconsistent... Because the final Office action is inconsistent in this fundamental aspect, it is improper and should be reversed." (page 13, paragraph 3-6).

Examiner's response ---- The Examiner respectfully disagree with Appellant. Appellant's argument reveals his misunderstanding of the role between the specification and the "claimed features". The Examiner's statement (quoted by the Applicant) is the

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comparison of the anti-aliasing system of Jozefowski to the anti-aliasing system of the Appellant, not the anti-aliasing system of Jozefowski to "the claimed feature" as the Appellant mentioned. Here, Appellant's logic is wrong because he knowingly or not knowingly changed the concept from "the anti-aliasing system" to "claimed feature". Thus, no such alleged "inconsistent" exists in the final Office Action. In addition, Jozefowski discloses an anti-aliasing system with the features such as using camera producing image data (page 14), super sampling in the boundary area (page 5-6), classification of boundary pixels (Figs. 1b, 2b-c, 18-21), and converting the pixels in accordance with the resolution of the display device (Figs. 5-6 page 24-26). The difference between Jozefowski and Appellant is Jozefowski utilizes camera while Appellant uses scanner (This is why the Examiner is cited Smith to show it is well known to use the scanner in the anti-aliasing system), and Jozefowski uses four classifications on boundary pixels while Appellant uses two classifications. Furthermore, even though the systems are very similar but not identical, Jozefowski is clearly read on the claimed features, "exterior" and "interior" boundary pixels because as the Appellant defines that interior boundary pixels is OFF pixels and exterior boundary pixels is ON pixels (specification 14, lines 10-12), Jozefowski defines boundary pixels as four different grays or hatches (Figs. 1b, 2b-2c) and "the degree of hatching matching the closeness to the line (those closest are cross-hatched, as 14, those a little further away are horizontally hatched, as 15, and those still further away are diagonally hatched. As 16)." (page 18, second paragraph). The different hatchings (classifications) related to the "closeness" to the line is clearly illustrated the same feature (exterior or interior

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boundary pixels) as claimed by Appellant. Moreover, another independent claim 30 does even not claim "interior" or "exterior" boundary pixels, and only claim boundary and non-boundary pixels, which Jozefowski expressly teaches (Figs. 1B, 2B-C, page 6).

Finally, anti-aliasing technique is not a break through technology. It developed long time ago and had widely used in the industries (see all cited references are published in early 90's). Appellant's broad claim language is clearly read on the cited references despite he adds some words "exterior" or "interior" to illustrate the supersampling boundary pixels.

Therefore, Appellant's argument is baseless and incorrect because of logic fallacy.

2. Appellants' argument---- Appellant argues that "a word search of Jozefowski reveal the reference fails to explicitly discuss "interior" and/or "exterior" pixels. The concept of "interior" pixels and/or "exterior" pixels is totally missing from Jozefowski." (page 14, paragraph 2), and "The closest that Jozefowski comes to the claimed invention is the disclosure of boundary pixels... this definition is given only in the context of a line. There is absolutely no mention or definition of "interior" pixels or "exterior" pixels is found in the Jozefowski. And. No disclosure of separating interior and exterior pixels is found in Jozefowski" (page 14, paragraph 8), and "Jozefowski is directed to reducing an antialiasing to a straight line and does not discloses, nor concern, establishing and/or separating boundary pixels into interior boundary pixels and exterior boundary pixels." (page 15, paragraph 2). "Furthermore, Jozefowski's pixel

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classification scheme is dramatically different from what is claimed... Instead, Jozefowski merely indicates that sub-pixels data in the frame store is used to calculated the "transparency" of each display pixel." (page 15, paragraph 1).

Examiner's response ---- The Examiner respectfully disagree with Appellant.

First, the Examiner believes that the test is not whether the "word" disclosed in the prior art or not like Appellant argued. If the found "word" test had been valid as Appellant argued, the work for examiners and judges would have been much easier. In addition, Appellant would have re-invented a wheel just call the wheel "exterior" and gotten a patent for it. Secondly, claim language is given its broadest reasonable interpretation. *In re Morris*, 127 F.3d 1048 (Fed. Cir. 1997). "The proper approach is to construe the claim language using standard dictionary definitions , because here, the claims have no specialized meaning." (citing Texas digital) *Schumer v. Laboratory Computer systems, Inc.*, 308 F.3d 1304 (Fed. Cir. 2002). The word "exterior" means 1) external, outer; 2) originating or acting from the outside; 3) appropriate for outdoor use ; 4) a surface or part that is outside; and 5) an outward or external appearance. The word "interior" means 1) relating to or located in the inside; 2) of or relating to the spiritual or mental life; 3) situated away from a shore line or border; inland; 4) the internal part or area; 5) one's spiritual or mental being; 6) the inland part of a particular political or geographic entity; and 7) representation of the inside of a room or structure, an in a painting (Webster's II New Riverside University Dictionary). Here, Joefowski's classification of the boundary pixels is at least fit the definitions of 1), 4) and 5) for the word "exterior" as ordinary and customary meaning because he define the boundary

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exterior pixels using “the degree of hatching matching the **closeness** to the line (those closest are cross-hatched, as 14, those a little further away are horizontally hatched, as 15, and those still further away are diagonally hatched. As 16).” (page 18, second paragraph, emphases by the Examiner). Also, Joefowski's classification of the boundary pixels is at least fit the definitions of 1), 3), 4) and 6) for the word “interior” as ordinary and customary meaning because he define the boundary interior pixels using “fully filled (as 13)” line or inland part (Fig. 2c, note that pixels fill with code 4). Thus, Joefowski clearly teaches the concept of “exterior” or “interior” pixels, and Jozefowski's classification of boundary pixels constitutes “exterior” or “interior” in its broadest reasonable interpretation (fitting the meaning of the dictionary). Thirdly, the Examiner recognizes that the “ordinary and customary meaning” of claim language can also be determined by reviewing the written description, drawings, and prosecution history. *Brookhill-Wilk, LLC v. Intuitive Surgical, Inc.*, No. 02-1145 (Fed. Cir. 2003). And looking at dictionary definition is only the first step; the specification must be checked in every case. *Combined Systems v. Defense Technology Corp.* No. 03-1251 (Fed. Cir. 2003). Appellant defines the words “exterior” and “interior” in the page 14 of specification as “the boundary pixels are separated into interior and exterior pixels, which are boundary pixels are ON and OFF, respectively, in the text or lineart mask.” ON pixel is interior pixel and OFF pixel is exterior, which give two different status of grays to the boundary pixels. Here, Jozefowski defines the boundary pixels to 4 different grays. Interior pixel is the pixel has dark gray and located in the lineart (Fig. 1b and 2b) or the inland area (Fig. 2c). **Only difference** is that Jozefowski did not name them as “interior” and “exterior”.

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Furthermore, the Examiner does not fully understand what point in the argument made by the Appellant in page 15, paragraph 1, wherein Appellant states that schemes are “dramatically different” and goes on comparing Fig. 1A and 2A of Jozefowski with the claimed invention. It is very clear that Fig. 1A and 2A of Jozefowski discloses the prior art which **does not have anti-aliasing** (see page 16, That is why they are dramatically different). Finally, Jozefowski expressly teaches that the boundary pixels are super sampled and separated into 4 different grays, one gray pixels (code 0 or 4) fill the line or inland area, and other gray pixels fill the outer areas of the boundary (Figs. 1b, 2b-c), which constitutes the claim language “separates the boundary pixels into interior boundary pixels and exterior boundary pixels.”

Therefore, Appellant’s argument is baseless, illogical and incorrect.

3. Appellants’ argument---- Appellant further argues that “the final Office Action also states, in the first full paragraph on page 5 of the final Office Action that Jozefowski can identify/separate interior/exterior boundary in one dimensional array pixels... there is no objective evidence of what alleged well known... what can possibly be by Jozefowski does not address what a Jozefowski actually discloses.. (page 15, paragraph 3-5).

Examiner’s response ---- The Examiner respectfully disagree with Appellant.

First, the page 5 of final Office Action is the counter argument regarding the argument made by Appellant, which is not related the claimed language. Secondly, the Appellant argument Jozefowski “draws the image in scanline order. Therefore Jozefowski has

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not need to separate the boundary pixels into interior boundary pixels and exterior boundary pixels,” (paper #7, page 17 line 1-2) is mis-characterization and misunderstanding of Jozefowski. Jozefowski stores the all pixels in the frame buffer storage (page 6), a block of RAM, separates the boundary pixels into 4 classes pixels in the frame, and renders the anti-aliasing image on the display line by line. Finally, Examiner stated in the final Office Action that “Examiner strongly disagrees with Applicant’s argument that Jozefowski can not identify/separate interior/exterior boundary pixels in one dimensional array pixels. It is well known in the art ...” By disagreeing with the argument of Appellant, The Examiner clearly did not state “Jozefowski can identify/separate interior/exterior boundary in one dimensional array pixels” as Appellant alleged. Since the argument is not related to the claim language, the Examiner has no intention to further address it for saving the precious time of Judges.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted



Jingge Wu

Primary Examiner

March 17, 2004

Appeal Conferees:

Amelia Au



Samir Ahmed

